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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,130	07/24/2003	Hans-Juergen Dobschal	GK-ZEI-3214 / 500343 2022	9366
26418	7590	07/23/2004	EXAMINER ASSAF, FAYEZ G	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			ART UNIT 2872	

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/626,130	Applicant(s) DOBSCHAL ET AL.	
	Examiner Fayez G. Assaf	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-12 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 13,17 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/15/04;04/29/04</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Objections

Claims 10-18 are objected to because of the following:

Regarding claim 10, the phrase "the imaging optical elements" lacks sufficient antecedent basis.

Regarding claim 12, the phrase "the spherical areas" lacks sufficient antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Iketaki (US 5,022,064).

Iketaki discloses an imaging system for a microscope based on X-Ray/extreme ultraviolet (EUV) radiation with wavelengths in the range of less than 100 nm (Abstract, claim 15), comprising: means (1 and 2 of Fig. 4) for magnification of 0.1x to 1000x (line 33 of Col. 7) and having a structural length of less than 5 m (inferred by reading the values on line 36 to 41 of Col. 7);

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and at least one imaging optical element in the beam path having a diffractive-reflective structure (10' of Fig. 12).

Regarding claim 14, Iketaki discloses the optical axis of the imaging system being inclined toward the object normal (see Fig. 12).

Regarding claims 11 and 12, Iketaki discloses diffractive-reflective structure being spherical and concave (see Fig. 11).

Regarding claims 15 and 16, Iketaki discloses the imaging optical elements being arranged in such a way that the optical paths intersect at least once (see Fig. 11) or the optical paths do not intersect (i.e. between two wavelengths, see Fig. 4).

Allowable Subject Matter

Claims 13, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 13 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest the two imaging optical elements being provided respectively with a diffractive-reflective structure, wherein the first imaging optical element has a concave area and the second imaging optical element has a convex area for the respective

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diffractive-reflective structure as set forth in the claimed combination.

Claim 17 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest another imaging system being arranged downstream in order to realize a total magnification of 5x to 10,000x as set forth in the claimed combination.

Claim 18 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest the first imaging optical element with spherically concave area having a diffractive-reflective active structure with about 240 lines/mm and a second imaging optical element with spherically convex area having a diffractive-reflective active structure with about 660 lines/mm, and the optical paths intersect once as set forth in the claimed combination.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fayez G. Assaf
Examiner
Art Unit 2872

FA
7/7/04